TECHNICAL REVIEW DOCUMENT
for
MODIFICATION TO OPERATING PERMIT 95OPBO082

CEMEX Construction Materials South, LLC – Lyons Cement Plant
Boulder County
Source ID 0130003

Prepared by Jacqueline Joyce
December 2011 – January 2012
Revised October and December 2012 and February 2013

I. Purpose:

This document establishes the decisions made regarding the requested modifications to the Operating Permit for the Lyons Cement Plant. This document provides information describing the type of modification and the changes made to the permit as requested by the source and the changes made due to the Division's analysis. This document is designed for reference during review of the proposed permit by EPA and for future reference by the Division to aid in any additional permit modifications at this facility. The conclusions made in this report are based on the information provided in the requests for modification submitted to the Division on August 19, 2008, May 4, 2009, April 29, 2010 (name change), March 25, 2011, March 7, 2012 and September 26, 2012, additional information submitted on October 28, 2011, comments on the draft permit submitted on February 29, 2012 and January 16, 2013, e-mail correspondence and telephone conversations with the source. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Permit Modification Request/Modification Type

The Operating Permit for the Lyons Cement Plant was issued on March 1, 2008. The modification request and modification type for the various requested modifications are as follows:

August 19, 2008 Modification

The purpose of this modification is to reflect changes made with clinker cooler dust re-route system as part of a supplemental environmental project (SEP). Prior to this modification, dust from the clinker cooler baghouses and heat exchanger was conveyed to either the A-frame building, the outdoor clinker piles or the clinker storage silos. From those locations the clinker dust was conveyed to the finish mill. As part of the SEP project, new piping was added to convey the clinker dust to a new baghouse (725-28) that will be located inside the finish mill building or to the fringe bin. From the new baghouse or the fringe bin, the clinker dust will be fed to the finish mill. Clinker dust will be routed to the new baghouse only if the finish mill is operational. If the finish mill is down, clinker dust will be routed through the new piping to the fringe bin. If the finish mill is down and the fringe bin is full, clinker dust will be routed via its original path (from clinker cooler to storage (A-frame, outdoor piles or clinker silos)).

Estimated emissions from the new baghouse were 0.38 tpy of PM and 0.19 tpy of PM_{10}. These estimates were based on the manufacturer's grain-loading specification on the baghouse, permitted hours of operation and the baghouse design flow rate. As indicated previously, the new baghouse is located inside the finish mill building, so the emission estimates are conservative, in that it is unlikely that emissions will be vented to the outside air.

Colorado Regulation No. 3, Part C, Section X.A identifies those modifications that can be processed under the minor permit modification procedures. Specifically, minor permit modifications "are not otherwise required by the Division to be processed as a significant modification" (Colorado Regulation No. 3, Part C, Section X.A.6).

The Division requires that "any change that causes a significant increase in emissions" be processed as a significant modification (Colorado Regulation No. 3, Part C, Section I.A.7.(a)). According to Part G of Regulation No. 3 (Section I.L, revisions adopted July 15, 1993, Subsection I.G for modifications) the Division considers that a significant increase in emissions is the potential to emit above the significance level defined in Colorado Regulation No. 3, Part D, Section II.A.42. Since emissions from the new baghouse are below the significance levels (PM – 25 tons/yr and PM_{10} – 15 tons/yr), the Division agrees that this modification meets the requirements for a minor modification.

May 4, 2009 Modification

The Division had noted some discrepancies between the Title V permit, the Division's inventory system and the Division's permitting database. Therefore, as requested by the Division, CEMEX submitted this modification to address those discrepancies. In their application, the source indicated that they believe these changes could be processed as an administrative amendment and in general the Division agrees with this assessment. However, in cases where equipment had

not been previously included in the permit, there are instances where incorporating such requirements may be more appropriately considered a minor modification.

Since these changes are minor in nature (i.e., no emission increase and do not trigger any new requirements), the Division considers that this modification meets the requirements of a minor modification.

April 29, 2010 Submittal

The source submitted APENs on April 29, 2010 indicating a name change to CEMEX Construction Materials South, LLC. As specified in Colorado Regulation No. 3, Part A, Section I.B.1.a.(ii), a name change is considered an administrative amendment.

March 25, 2011 Modification

The primary purpose of the March 25, 2011 modification is to remove the language in Conditions 11.3 and 13.2 indicating that the fraction of PM that is PM_{10} shall be 50%. Past permitting decisions were based on PM_{10} being 50% of PM and as a result this language was included in the permit. The Division considers that as long performance testing indicates that PM_{10} emissions meet the PM_{10} emission limitations, that it is not necessary to assess the percent of PM that is PM_{10}. In this application the source also requested some minor administrative type changes to the permit.

Colorado Regulation No. 3, Part C, Section X.A.2 specifies that minor permit modifications may be used for modifications that do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in a permit. Since the purpose of the modification is to remove the requirement to demonstrate that PM_{10} is 50% of PM the Division considers that this is not a "significant change in existing monitoring requirements". The permit still requires that the source conduct performance tests to monitor compliance with the PM_{10} emission limitations.

March 7, 2012 Modification

In their March 7, 2012 application CEMEX indicated their intent to replace the existing pug mill (emission point P007A, S041). CEMEX is not requesting an increase in emissions or throughput for the pug mill. Current permitted emissions from the pug mill are below the significance level. In their application CEMEX indicated that the replacement of the pug mill would not affect equipment upstream or downstream of the pug mill (i.e. the new pug mill would not de-bottleneck equipment or increase utilization of other emission units). In the current Title V permit (renewal issued March 1, 2008) there is no descriptive information for the pug mill (i.e. model, manufacturer and/or serial no.), however,

the table in Section I, Condition 4.1 lists the size (30 tons/hr) of the unit. The new unit will be larger (150 tons/hr) thus the modification request. Since this modification does not result in a change in emission or throughput limits the Division considers that this modification can be processed as a minor modification.

September 26, 2012 Modification

The source submitted an application on September 26, 2012 to address the load-out of other materials at the coal/clinker load-out (P014). While construction permits were issued to some of the equipment addressed in P014, these are old permits (issued in the early 1970s) and the permits never included emission and/or throughput limits. Since the equipment can accommodate the load-in or load-out of other materials, such as iron slag, the Division considers that emission and throughput limits would not be necessary for this change. However, since the descriptions associated with the equipment indicate that the equipment handles coal and/or clinker the Division indicated that modification could be processed as an administrative amendment.

III. Modeling

The only change to this permit that appears to result in an increase in emissions is the addition of the SEP baghouse. The increase in emissions is due to the calculation method used, which estimates emissions based on baghouse grain-loading and flow-rate and the hours of operation. There is no increase in materials processed with this modification and no increase in the number of transfers associated with the proposed modification. At any rate, PM emissions from this modification are well below the modeling threshold; therefore, modeling is not warranted.

As discussed later in this document, as part of these modifications the permitted emission limitations for a two emission groups (P009 and P007A) were increased. However, these increases were due to addressing existing equipment that had not been previously identified in the permit. As such modeling is not warranted for these emission units.

IV. Discussion of Modifications Made

The following discussion related to modifications is with respect to the current Title V permit (renewed March 1, 2008) and unless specifically noted as “new”, the condition numbers identified in this document reflect the condition numbers in the current (renewed March 1, 2008) Title V permit. Because some permit conditions in the current Title V permit have been removed, reorganized and/or reformatted as part of this permitting process, the condition numbers discussed in this document may not reflect the condition numbers in the draft Title V permit

Source Requested Modifications

The Division addressed the source's requested modifications as follows:

August 19, 2008 Modification

The August 19, 2008 modification indicated that the SEP baghouse (routes fine clinker dust from the clinker cooler baghouse to the finish mill) should be added as a separate emission point with a separate identifier (P051). However in the May 4, 2009 modification, the source indicated that emissions from the SEP baghouse should be grouped with the finish mill separator (P012). The fine clinker dust collected by the SEP baghouse is typically transferred to the finish mill separator, so the Division agrees that this is an appropriate way to group emission sources. Therefore, the following changes were made to address the SEP baghouse:

- The annual PM and PM_{10} emission limits for P012 in Condition 11.3 were increased by 0.38 tons/yr for PM and 0.19 tpy for PM_{10}. The PM and PM_{10} emission limits for P012 are also noted in Condition 24 (CAM) and Appendix H (CAM plan), therefore, the limits were also adjusted in these locations.

- The throughput limit for the SEP baghouse was added to Condition 11.3.

- The SEP baghouse was included in the table in Condition 11.3

- Since the SEP baghouse is located in the finish mill building performance testing won't be required for this unit. Therefore, language was added to the permit to indicate that the PM and PM_{10} emission factor for this unit will be the manufacturer's grain loading specification.

Based on the throughput limit for the SEP baghouse, uncontrolled emissions from the SEP baghouse are below the major source level. Emission estimates were based on the SEP baghouse throughput limit of 161,380 tons/yr of clinker dust and emission factors from AP-42, Section 11.12 (dated 6/06), Table 11.12-2 – uncontrolled factors for cement unloading to elevated storage silo (pneumatic). Since uncontrolled emissions are below the major source level, the SEP baghouse is not subject to CAM requirements.

May 4, 2009 Modification

Section I, Condition 4.1

The changes to the table in general were made as requested. The significant exceptions are as follows:

- The column labeled "size" was removed. While some information in this

column addresses the size or capacity of certain emission units, in several cases permitted production rates are included in this column. The Division considers that it isn't necessary to include the information in this column in the permit.

- Since the coal unloading spout is capable of handling clinker, it was removed from the insignificant activity list in Appendix A and moved to this table.

- The 8,000 gallon fuel storage tank was removed from the table. This tank stores diesel fuel and qualifies as an insignificant activity, so it has been removed from this table and included in the insignificant activity list in Appendix A. Note that the size of the tank is correctly reflected in the insignificant activity list.

Section II – General and Appendices B and C

- The summary tables in Section II were revised to reflect the changes made to the table in Section I, Condition 4.1.

- The tables in appendices B and C were revised to reflect the changes made to the table in Section I, Condition 4.1.

Section II, Condition 4.5

- Condition 4.5 indicates that the primary crusher (S002) is subject to CAM, but S002 is not subject to CAM. Therefore Condition 4.5 was removed. Note that S002 was not listed as subject to CAM in Section I, Condition 6.1; Section II, Condition 24 and Appendix H of the permit.

Section II, Condition 10.7

- Language has been added to Condition 10.7 clarifying the emission limitations apply to kiln burning (P007) and that there is no PM or PM_{10} emission limitations for P008 (Clinker Cooling and Transfer to Storage for Finish Mill). Since only the kiln and clinker cooler are required to conduct PM/PM_{10} stack tests, the language in this condition was revised to address how PM/PM_{10} emissions from other emission units in emission group P008 are to be determined.

Section II, Condition 11

- The baghouse id numbers in Condition 11.3 were corrected as requested in the application.

- The emission unit id numbers in Condition 11.7 were corrected to reflect the changes made to the table in Section I, Condition 4.1.

Section II, Condition 12.5

- Revised Condition 12.5 to indicate which units are subject to MACT requirements.

Performance Test Emission Factors

In this modification request, the source indicated that some emission factors derived from performance tests were listed incorrectly in the permit. The source provided additional information in an e-mail dated October 28, 2011 as to the incorrect emission factors. Corrections to stack test emission factors were made as follows:

- In the October 28, 2011 e-mail, the source indicated that the VOC emission factor for the dryer was incorrect and provided the results of the 2006 test to indicate the correct emission factor. However, performance tests were conducted on the dryer in 2011, therefore, all emission factors for the dryer in Conditions 5.4 and 5.5 that are based on natural gas testing were revised to reflect the results of the 2011 performance tests.

- The source indicated that they would prefer to use the HCl emission factor from a stack test to estimate emissions from the kiln (for purposes of APEN reporting), rather than the factor included in the permit (from a Portland Cement Associate Report). The Division considers that performance test emission factors are preferable, therefore, the HCl emission factor in Condition 10.9 was revised to reflect the emission factor from the November 2002 performance test.

- The Division updated the emission factor table in Condition 10.7 to include the most recent stack test emission factors for the clinker cooler and to update the kiln emission factors to the most recent stack test results.

Section II.23

- Emission unit information (e.g. stack id) was updated to address the changes made to the table in Section I, Condition 1.4. In addition, changes were made to more appropriately address the individual emission unit subject to the requirements.

Section II.24

- The emission unit information in the table was updated to address the changes made to Section I, Condition 1.4.

Appendix H

- Emission unit information was revised to reflect the changes made to Section I, Condition 1.4.

April 29, 2010 Submittal

The permit was revised to reflect the name change from "CEMEX, Inc." to CEMEX Construction Materials South, LLC". This involves changes to the page following the cover page, the permit headers and the reports in Appendices B and C.

March 25, 2011 Modification

Page following cover page

- The permit contact was revised as requested.

Section I – General Activities and Summary

- Removed the language in Condition 1.1 regarding the oxygen generation plant as this equipment has been removed from the facility.

- The plant identifier for Raw Material and Storage Handling has been changed from "P004" to "P000" since "P004" was used for another activity group (raw material silos).

Section II.11

- For Condition 11.3 the column labeled "emission factor" in the summary table was revised to read "see Condition 11.3".

- The text portion of Condition 11.3 was revised to specify the PM_{10} emission factor to be used in emission calculations, rather than assuming that PM_{10} is 50% of PM. In addition, the text portion was revised to indicate that performance testing conducted every 5 year for PM_{10} is to verify that the grain loading specifications were met. Finally, the table in Condition 11.3 was revised to include the grain loading specifications for PM_{10}. These are based on an assumption that PM_{10} is 50% of PM.

- The sentence beginning with "In lieu of" in Condition 11.3 was removed.

- The language in Condition 11.3 indicating that PM_{10} shall be 50% of PM has been removed. In addition, the discussion of the permittee's reliance on this assumption (PM_{10} = 50% of PM) to avoid major source non-attainment area review and additional testing to verify the assumption has been removed. Since the Division has revised the permit to require that the performance test for PM_{10} be conducted to verify the baghouse grain-loading, which for PM_{10} is presumed to be 50% of PM, this language is no longer relevant.

Section II.13

- The language in Condition 13.2 in the summary table under the column labeled "emission factor" for PM_{10} was revised to "See Condition 13.2".

- The text portion of Condition 13.2 was revised to specify the PM_{10} emission factor to be used in emission calculations, rather than assuming that PM_{10} is 50% of PM. In addition, the text portion was revised to indicate that performance testing conducted every 5 year for PM_{10} is to verify that the grain loading specifications were met. Finally, the table in Condition 13.2 was revised to include the grain loading specifications for PM_{10}. These are based on an assumption that PM_{10} is 50% of PM.

- The sentence beginning with "In lieu of" in Condition 13.2 was removed.

- The language in Condition 13.2 indicating that PM_{10} shall be 50% of PM has been removed. In addition, the discussion of the permittee's reliance on this assumption (PM_{10} = 50% of PM) to avoid major source non-attainment area review and additional testing to verify the assumption has been removed. Since the Division has revised the permit to require that the performance test for PM_{10} be conducted to verify the baghouse grain-loading, which for PM_{10} is presumed to be 50% of PM, this language is no longer relevant.

February 29, 2012 Comments on the Draft Permit and Technical Review Document

In general the February 29, 2012 comments addressed the manner in which the Division incorporated the previous modifications in the draft permit. However, there were a few comments that addressed changes beyond the modifications submitted and they will be addressed here.

Page Following Cover Page

- The Responsible Official was revised.

Section I, Table 4.1

- Noted those sources/baghouses that vent inside a building.

Section II.11

In their comments, CEMEX requested that S021 and S033 be grouped with P009. Points S021 and S033 represent two baghouses at the facility that were not previously identified in the Title V permit or in any construction permit. In their May 4, 2009 submittal, CEMEX requested that these baghouses be grouped with the clinker cooler (P008). In order to accommodate this change, the annual PM and PM_{10} emissions were increased by 1.48 and 0.74 tons/yr,

respectively to accommodate the additional baghouses. The initial issuance of construction permit 98BO0259, which includes requirements for P009, in 1998 indicated that this permit was issued in conjunction with permits 94BO1414, 04BO593 and 98BO315 and as such was part of a project for which the net emissions increase were below the significance level. The Division considers that since these baghouses were not addressed in the initial issuance of permit 98BO0259 (or subsequent issuances of this permit), these baghouses were not used to net out of any major stationary source review, so revising the emission limits to address S021 and S033 does not affect any previous netting analysis.

Sections II.11 and 13

In their comments, CEMEX noted that several of the baghouses vented inside a building and requested that language be added to the permit indicating that performance tests would not be required for baghouses that are venting indoors. The Division agreed to make this change. The permit does not specifically say which baghouses are to be tested only that a representative baghouse from each emission group shall be tested every five years. The Division would not generally require a performance test for a baghouse located indoors and because the permit specifies only that a representative baghouse be tested, the baghouses venting outside are more likely to be tested under the current permit language. Since there is no requirement that specifies that individual baghouses be tested and each emission group has representative baghouses that vent outdoors, the Divisions considers that this change would not be a significant change in monitoring. The testing requirements specified in the permit will still be fulfilled since a representative baghouse in each emission group will still be tested every five years. Therefore, since this change is not a significant change in existing monitoring, then this change can be processed with this minor modification. In order to address this request, the following changes were made:

- Language was added to Conditions. 11.3 and 13.2 indicating that were not required for baghouses that vent inside of a building. The specific stack ids for the baghouses venting inside were noted in the permit.

Condition 5.3 and Appendix G

Appendix G includes “Coal Sampling Plan Elements” and in accordance with Condition 5.3, a fuel sampling plan is required if coal is fired in the dryer. Coal is only permitted as a back-up fuel for the dryer in cases of emergencies or natural gas curtailments. Condition 5.3 requires that prior to the first sampling event a fuel sampling plan shall be submitted and shall include the elements in Appendix G. The Division has revised Condition 5.3 to require sampling of every coal shipment (the current permit requires semi-annual sampling) using ASTM Methods, or equivalent if approved in advance by the Division. In lieu of sampling the source may rely on vendor receipts provided the sampling was conducted in accordance with ASTM methods. Since Appendix G is no longer referenced in Condition 5.3, Appendix G has been removed.

Appendix H

- Updated the emission limitations listed for P009 in the CAM Plan to reflect S021 and S033. Note that assuming a control efficiency of 99% uncontrolled emissions from S021 and S033 are below the major source level, so S021 and S033 are not subject to CAM.

March 7, 2012 Modification

As discussed previously, the only language in the current permit that was specific to the "old" pug mill was the size description in the table in Section I, Condition 1.4. As discussed under the May 4, 2009 modification, the "size" column in the table in Section I, Condition 1.4 was removed. No additional changes are necessary to address the replacement pug mill.

September 26, 2012 Modification

The following changes were made to address the September 26, 2012 modification:

- Revised the description of the equipment under P014 in the table in Section I, Condition 4.1 to indicate the equipment is used for "materials handling", rather than "fuel/clinker handling". This same change was made to the tables in Appendices B and C and to the table header in Section II.12 of the permit

January 16, 2013 Comments on the Draft Permit and Technical Review Document

In general the January 16, 2013 comments addressed the manner in which the Division incorporated the previous modifications in the draft permit. However, there were a few comments that addressed changes beyond the modifications submitted and they will be addressed here.

Section II.2

- Added a note to Condition 2.4 of the summary table indicating the control efficiency that may be applied to the emission factors.

Section II, Conditions 5 and 10

- Revised Conditions 5.5 and 10.10 to allow the use of "Method 12 or 29" as reference methods for the lead performance tests.

Section II, Condition 11

- Corrected the design flow rate for baghouse 725-3 in the table in Condition 11.3.

- In the summary table under Condition 11.3, included the control efficiency and one way road length under PM.

Section II.13

In their comments, CEMEX requested that S022 (kiln return dust baghouse) be grouped with P007A. Points S022 represents a baghouses at the facility that were not previously identified in the Title V permit or in any construction permit. In their May 4, 2009 submittal, CEMEX requested that this baghouse be grouped with the kiln (P007). In order to accommodate this change, the annual PM and PM_{10} emissions for P007A (emission group S001, S066 and S067) were increased by 4.56 and 2.28 tons/yr, respectively to accommodate the additional baghouse. The initial issuance of construction permit 98BO0315, which includes requirements for P007A, in 1998 indicated that this permit was issued in conjunction with permits 94BO1414, 04BO593 and 98BO0259 and as such was part of a project for which the net emissions increase were below the significance level. The Division considers that since this baghouse (S022) was not addressed in the initial issuance of permit 98BO0315 (or subsequent issuances of this permit), this baghouse was not used to net out of any major stationary source review, so revising the emission limits to address S022 does not affect any previous netting analysis.

Since the baghouse grain-loading for S022 is lower than for the other baghouses within the emission group (includes S001, S066 and S067) and since this baghouse was not previously subject to emission limitations, the permit does not require a performance test for the point and the permit requires that emissions be based on the grain-loading specified in the permit.

Appendix H

- Updated the emission limitations listed for P00A (S001, S066 and S067) in the CAM Plan to reflect S022. Note that assuming a control efficiency of 99% uncontrolled emissions from S022 are above the major source level, so S022 is subject to CAM. Note that since controlled emissions are below the major source level, CAM for S022 does not apply until renewal of the permit.

Other Modifications

In addition to the requested modifications made by the source, the Division used this opportunity to include changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this modification.

The Division has made the following revisions, based on recent internal permit processing decisions and EPA comments on other permits, to the Lyons Cement Plant Operating Permit with the source's requested modifications. These changes are as follows:

Section I – General Activities and Summary

- Condition 1.1 was revised to correct the citation for the definition of the 8-hour ozone control area.

- Condition 1.4 was revised to remove Section IV, Condition 3.d as a state-only requirement, since EPA approved these provisions into Colorado's SIP effective October 6, 2008.

- The cold cleaner solvent vat was added to the table in Condition 4.1.

Section II.2

- Corrected the PM emission limits to reflect the emission factor and the throughput limits. The PM_{10} limits in the current permit reflect emission factors and throughput but the PM limits do not.

- Condition 2.3 was removed. This condition included the Reg 1 PM limits (process weight rate limits). In the renewal permit (issued March 1, 2008), the Division considered that the NSPS Subpart OOO requirements applied to the conveyor, therefore, the Reg 1 PM weight rate limits were streamlined in favor of the more stringent NSPS Subpart OOO PM requirements.

Section II.5

- Removed Condition 5.6 (state-only lead standard of 1.5 $\mu g/m^3$). Since EPA promulgated a more stringent national ambient air quality standard for lead in 2008, the Division removed the state-only lead requirement from Colorado Regulation No. 8, Part C. Therefore, the requirement is being removed from the permit. Note that the lead NAAQS will not be included in the permit as NAAQS are not considered applicable requirements and as such are not included in Title V permits.

Section II.10

- Removed Condition 10.11 (state-only lead standard of 1.5 $\mu g/m^3$). Since EPA promulgated a more stringent national ambient air quality standard for lead in 2008, the Division removed the state-only lead requirement from Colorado Regulation No. 8, Part C. Therefore, the requirement is

being removed from the permit. Note that the lead NAAQS will not be included in the permit as NAAQS are not considered applicable requirements and as such are not included in Title V permits.

Section II.11 and 13

- The stack id numbers (e.g. S022) were added to the tables in Conditions 11.3 and 13.2.

Section II.15

- Emissions from the gasoline storage tank are below the APEN de minimis level, as such recording of throughput and calculation of emissions are not required. Therefore, Conditions 15.1 and 15.2 have been removed. And a note was added to the bottom of the summary table indicating that the APEN reporting requirements do not apply to the tank.

- The language in Condition 15.3 has been revised and reformatted to more clearly address the requirements in Regulation No. 7 (RACT requirements) and to include the requirements in Reg 7, Section V.B.

Section II.18

The reporting requirements included in this condition were removed, since information on report submittals is included elsewhere in the permit (e.g. the page following the cover page includes the due dates for the semi-annual monitoring reports).

A cold cleaner solvent vat is included in the insignificant activity list in Appendix A and as noted there the vat is subject to requirements in Colorado Regulation No. 7, Section X. Although emissions from the solvent vat are below the APEN de minimis level and therefore exempt from both APEN reporting and construction permit requirements, under the "catch-all" provisions in Regulation No. 3, Part C, Section II.E (2nd paragraph) the solvent vat cannot be considered an insignificant activity because it is subject to specific requirements in Regulation No. 7. Since the solvent vat cannot be considered an insignificant activity, it has been included in Section II.18 of the permit.

The applicable requirements from Regulation No. 7 for this unit are as follows:

- Transfer and storage of waste solvent and used solvent (Reg 7, Sections X.A.3 and 4)

- Solvent Cold Cleaner Requirements (Reg 7, Section X.B)

    - Control Equipment - covers, drainage, labeling and spray apparatus requirements (Reg 7, Section X.B.1)

- Operating Requirements (Reg 7, Section X.B.2)

Sections II.14, 25 and 26

- These sections were included in one condition (Section II.14) that has been labeled "Lyons Cement Plant - Fugitive Emissions".

- Added Reg 1 requirements for utilizing measures to control PM emissions (Reg 1, Section III.D.1.a) and the trigger for submittal of a PM control plan (Reg 1, Section III.D.1.c).

Section II.27

- With the removal of Conditions 25 and 26, Section II.27 (rail car unloader) has been renumbered as Condition II.25.

Sandstone Quarry

During a review of CEMEX's emission sources, the Division discovered that CEMEX owned a sandstone quarry located approximately 1 mile from the Lyons Cement Plant. Although the sandstone quarry was assigned a separate AIRS id from the Lyons Cement Plant, the construction permit (02BO0176F, final approval issued February 11, 2004) for the sandstone quarry indicated that it was part of the Cement Plant.

The three part test (common control, same SIC code and contiguous or adjacent) for determining whether sources are single or separate is derived from the definition of a stationary source. The Division considers that the sandstone quarry and the Lyons Cement Plant are under common control because CEMEX owns and operates both, so the first factor in the three part test has been met. The sandstone mined at the quarry is transported to the Lyons Cement Plant for crushing. CEMEX submitted information with their February 29, 2012 comments on the draft permit addressing the sandstone quarry. In their information submittal, CEMEX indicated that the quarry is leased to Loukonen Brothers and that under the terms of the lease that Loukonen Brothers may remove up to 6,000 tons per year of sandstone. The construction permit issued for the sandstone quarry allows 60,000 tons/yr of material to be mined from the quarry, so under the terms of the lease only 10% of the material permitted to be removed from the quarry may be used for purposes other than to supply the Lyons Cement Plant. Therefore, although the sandstone quarry and the Lyons Cement Plant do not share the same first two digits of the SIC code, the sandstone quarry operates as a support facility to the Lyons Cement Plant and as such is considered to have the same first two digits of the SIC code (the facility is classified by the SIC code for the primary activity, which in this case in cement production). The final criterion of the three part test is whether the facilities are contiguous or adjacent. In order to be contiguous, the sandstone quarry and the cement plant properties would have to be in actual contact with each other. In

order to be adjacent, the sandstone quarry and the cement plant would have to be “not distant or nearby”. Previous correspondence with CEMEX has indicated that the properties are not contiguous and the Division agrees with this assessment. However, the sandstone quarry is located approximately 1 mile from the Lyons Cement Plant. CEMEX has indicated that the “transportation distance” between the cement plant and the sandstone quarry are approximately two miles. CEMEX indicated that the sandstone is transported to the primary crusher located at the Dowe Flats quarry, rather than to the primary crusher located at the Lyons Cement plant. In either case, both the physical location and the “transportation distance” between the two sites are nearby and hence the facilities are adjacent. Since all three factors in the three part test have been met, the Division considers that the sandstone quarry and the Lyons Cement Plant are a single source.

Note that although the sandstone quarry is now considered part of the Lyons Cement Plant (and subsequently is now a major source for HAPS), the provisions in 40 CFR Part 63 Subpart LLL do not apply since the sandstone is a raw material and therefore, not subject to the provisions in Subpart LLL.

Although a construction permit (02BO0176F) was issued for the sandstone quarry, based on the permitted level of sandstone that can be removed (60,000 tons/yr), the sandstone quarry would be exempt from construction permit requirements (Reg 3, Part B, Section II.D.1.g) and can be considered an insignificant activity (Reg 3, Part C, Section II.E.3.qqq). Therefore, the sandstone quarry has been included in the insignificant activity list in Appendix A of the permit. CEMEX submitted a request to cancel the construction permit for then sandstone quarry on January 22, 2013. Note that an APEN must be submitted for the quarry provided actual, uncontrolled emissions exceed the APEN de minimis level.

Section III – Permit Shield

- The following revisions were made to the table in Section III.3 (streamlined conditions) to be more consistent with the way streamlined conditions are presented in other Title V permits:
    - The column labeled “source” was revised to “permit condition(s)”. This column includes the requirement for the more stringent requirement that is the basis for streamlining the requirement. The language included in this column has been replaced with the relevant permit conditions.
    - The column labeled “requirement” was revised to “streamlined (subsumed) requirement”.

- The column labeled "justification" was removed. The table now lists the permit conditions that include the more stringent requirements which provide the basis for streamlining the listed requirements.
- Some of the citations to permit conditions in the 1st column were corrected.

Section VI – General Conditions

- Added a version date.
- The paragraph in Condition 3.d indicating that the requirements are state-only has been removed, since EPA approved these provisions into Colorado's SIP effective October 6, 2008
- The title for Condition 6 was changed from "Emission Standards for Asbestos" to "Emission Controls for Asbestos" and in the text the phrase "emission standards for asbestos" was changed to "asbestos control".
- General Condition 29 was revised by reformatting and adding the provisions in Reg 7, Section III.C as paragraph e.

Appendix A – Insignificant Activity List

- Specifically cited insignificant activity categories and grouped equipment within these categories.
- Added the sandstone quarry.
- Removed the cold cleaner solvent vat from the insignificant activity list. Although this unit has emissions below the APEN de minimis level, since it is subject to the Reg 7 requirements it cannot be considered an insignificant activity as indicated in the "catch-all" provisions in Reg 3, Part C, Section II.E.
- Removed the coal/clinker unloading spout from the insignificant activity list. The source has indicated that clinker may be unloaded from the spout and in that situation the spout is subject to the requirements in 40 CFR Part 63 Subpart LLL. Under the "catch-all" provisions in Reg 3, Part C, Section II.E, a source that is subject to MACT requirements cannot be considered an insignificant activity.

Appendices B and C

- The cold cleaner solvent vat was added to the tables.

Appendix D

- Changed the name of the Division contact for reports in Appendix D.

Appendix H

- With the removal of the Appendix G, this Appendix H (CAM Plan) is now re-numbered as Appendix G.